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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23446	7590	11/12/2004	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			DIVECHA, KAMAL B	
			ART UNIT	PAPER NUMBER
			2151	

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,057

Applicant(s)

STROLL, ZOLTAN Z.

Examiner

KAMAL B. DIVECHA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) 7, 11, 12 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because the label F of figure 1 was not mentioned in the description. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it contains the legal phraseology such as the phrase "comprising". Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The title of the invention is not very descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. The following title is suggested: System and method of a processing satellite with onboard proxy cache.

Claim Objections

6. Claims 7, 11, 12 and 14 are objected to because of the following informalities:

- The phrase "recovering" lacks antecedent basis in claim 7.

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- “The proxy cache subsystem” mentioned in claim 11, 12 and 14 needs to be rephrased to “a processing satellite proxy cache subsystem”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 10 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 10 recites the limitation “the web proxy cache” in the 3rd feature of claim. There is insufficient antecedent basis for this limitation in the claim.
- Claim 13 recites the same limitation as above in the 3rd feature of the claim. There is also insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-7, 10-13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Saunders (U.S. Patent No. 6,697,850 B1).

The applied reference has a common assignee (Northrop Grumman Corporation) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Saunders discloses: A method for operating a proxy cache in a satellite communications system, the method comprising: demodulating and decoding a satellite uplink to recover a resource information request (column 4 lines 56-57 and column 5 lines 18-21); directing the resource information request to a proxy cache (column 6 lines 5-6); and when the proxy cache stores resource information content associated with the information request, downlinking the resource information content rather than downlinking the resource information request (column 3 lines 39-45).

With respect to claim 2, Saunders further discloses: the method of claim 1 above, further comprising downlinking the resource information request when the proxy cache does not store resource information content associated with the resource information request (column 5 lines 26-34 and lines 50-55).

With respect to claim 3, Saunders further discloses: the method of claim 1 above, further comprising receiving responsive resource information content in response to the resource

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information request, and downlinking the responsive resource information content (column 5 lines 35-56).

With respect to claim 4, Saunders further discloses: the method as in claim 3 above, further comprising storing the responsive resource information in the proxy cache (column 5 lines 63-65).

With respect to claim 5, Saunders further discloses: the method as in claim 4 above, further comprising overwriting existing resource information content with the responsive resource information content (column 5 lines 58-63 and column 6 lines 55-63).

With respect to claim 7, Saunders further discloses: the method as in claim 1, wherein recovering comprises recovering a Uniform Resource Locator (read as Webpage) from the satellite uplink (column 5 lines 20-23).

With respect to claim 6, Saunders discloses: a method for operating a proxy cache in a satellite communications system, the method comprising: demodulating and decoding a satellite uplink to recover a resource information request (column 4 lines 56-57 and column 5 lines 18-21); switching the resource information request from a switch input to a switch output port coupled to a proxy cache (figure 3: requests 126 flow through generator 144 and its input and output interface to a proxy cache 124); and when the proxy cache stores resource information content associated with the information request, downlinking the resource information content rather than downlinking the resource information request (column 3 lines 39-45).

With respect to claim 10, Saunders discloses: a processing satellite proxy cache subsystem comprising: an uplink demodulator and decoder for recovering a resource information request from a satellite uplink (column 5 lines 18-21 and component number 104 of figure 2); a

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proxy cache (column 6 line 51) comprising a cache memory (column 3 lines 41-42) and a processor (column 3 line 43 and column 4 line 49); a switch coupled to the uplink demodulator and to the web proxy cache through a switch output port for directing the resource information request to the web proxy cache (figure 3: the flow from 122 to 140 and from 124 to 128); and the processor responsive to the resource information request for retrieving information associated with the information request from the cache memory for downlinking (column 3 lines 43-45).

With respect to claim 11, Saunders further discloses: the proxy cache subsystem as in claim 10, wherein the cache memory comprises a solid state recorder (column 4 lines 52-54).

With respect to claim 12, Saunders further discloses: the proxy cache subsystem as in claim 10, wherein the resource information request is a uniform resource locator (read as web page request: column 5 lines 18-23, column 6 lines 2-4).

With respect to claim 13, Saunders discloses: a processing satellite cache subsystem comprising: an uplink demodulator and decoder for recovering a resource information request from a satellite uplink (column 5 lines 18-21 and component number 104 of figure 2); a proxy cache (column 6 line 51) comprising a cache memory (column 3 lines 41-42) and a processor (column 3 line 43 and column 4 line 49); a switch coupled to the uplink demodulator and to the web proxy cache through a switch output port for directing the resource information request to the web proxy cache (figure 3: the flow from 122 to 140 and from 124 to 128); and the processor responsive to the resource information request for retrieving information associated with the information request from the cache memory for downlinking (column 3 lines 43-45) operable to forward the resource information request through the switch (read as router) to a satellite downlink when the cache memory does not store resource information content associated with

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the information request (column 4 lines 17-24 and lines 57-58; column 6 lines 15-16 and figure 3 summarizes the limitation).

With respect to claim 15, Saunders discloses: an uplink demodulator and decoder for recovering a resource information request from a satellite uplink (column 5 lines 18-21 and component number 104 of figure 2); a proxy cache (column 6 line 51) comprising a cache memory (column 3 lines 41-42, column 4 line 55) and a processor (column 3 line 43 and column 4 line 49) executing a resource information content replacement algorithm out of a program memory coupled to the processor (column 5 lines 58-65, column 6 lines 36-55: read cache hit filter and statistics generator as a processor executing updating instructions); a switch coupled to the uplink demodulator and to the web proxy cache through a switch output port for directing the resource information request to the web proxy cache (figure 3: the flow from 122 to 140 and from 124 to 128); and the processor responsive to the resource information request for retrieving information associated with the information request from the cache memory for downlinking (column 3 lines 43-45).

11. Claim 16 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Dillon et al (U.S. Patent No. 6,658,463 B1).

Dillon et al discloses a proxy cache for a satellite communication system (FIG 5a), the proxy cache comprising: a resource information content memory (column 8 lines 40-43, see figure 5b); a processor coupled to the resource information content memory (column 8 lines 40-43, see also figure 5b); a switch output port connection for receiving a resource information request recovered from a satellite uplink (column 8 lines 47-49, see also figure 5b); and a switch

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input port connection for routing resource information content retrieved by the processor from the resource information content memory to a satellite downlink in response to the resource information request (column 8 lines 40-43, see figure 5b).

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claim 19 is rejected under 35 U.S.C. 102(b) based upon the invention by Stamm et al (U.S. Patent No. 5,317,720).

Stamm et al discloses a proxy cache for a satellite communications system, the proxy cache comprising: a resource information content memory (figure 2 component number 12); a processor coupled to the resource information content memory (column 75 lines 24-25, figure 2: item number 10 and 12 through item number 20); a content addressable memory storing pointers into the resource information content memory (column 40 lines 47-50); a switch output port connection (figure 1 reference number 21) for receiving a resource information request recovered from a satellite uplink; and a switch input port connection (figure 1 reference number 21) for routing resource information content retrieved by the processor from the resource information content memory to a satellite downlink in response to the resource information request.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being obvious over Saunders in view of "official Notice".

16. As per claim 14, Saunders discloses the method as in claim 10, wherein Saunders does not explicitly disclose show the processor is further responsive to store responsive resource information in the proxy cache in response to the resource information request. The limitation is expected and well known in the art. Processors would have been programmed to perform the functions such as storing, retrieving, issuing, writing and many more other similar functions.

17. Claims 8, 9, 17, 18, 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon et al (U.S. Patent No. 6,658,463 B1) in view of Wan (U.S. Patent No. 6,199,190).

As in claim 8 and 9, Dillon et al discloses: a method for operating a proxy cache in a satellite communication system (see abstract), the method comprising: directing the resource information request to a proxy cache (figure 5c: a step of relaying the browsers request to the upstream proxy server); and when the proxy cache stores resource information content associated with the information request, downlinking (figure 5c: a step of returning URL to browser via satellite multicasting) the resource information content rather than downlinking the resource information request.

Dillon et al does not explicitly disclose demodulating and decoding, using at least one of block decoding and convolution decoding, a satellite uplink to recover a resource information request as in claim 8 and the step of demodulating and decoding, by convolution decoding

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followed by block decoding, a satellite uplink to recover a resource information request as in claim 9.

Wan explicitly discloses a wireless communication system (column 2 lines 35-37) comprising the method of coding at the transmitting end (column 2 lines 28-30) and the method further involves the steps of receiving the coded information block at the receiver, convolutionally decoding the coded information (column 2 lines 38-41). Wan also teaches that the received data at the receiver end is reordered, deinterleaved, convolutional decoded and then block decoded (column 6 lines 13-16 and figure 5).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Wan as stated above with the satellite system of Dillon et al for decoding at the receiver end because it would have increased the overall efficiency of the system by detecting and correcting errors introduced in the communication channel during transmission.

18. The limitations set forth in claims 17, 18 and 20-23 are expected, well know and obvious to the one ordinary skilled in the art.

The motivation for doing so (as in claim 17) would have been so that a system of storage for a satellite application is obtained wherein information or data would be stored, accessed and retrieved in an efficient manner.

Each web page is uniquely identified by URL (Uniform Resource Locator), which is like a document call number and is the address of the document on the network. URL is a web address that points to a unique location in a targeted server on the World Wide Web. Therefore,

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the motivation for the limitation as set forth in claim 18 would have been so that the message would have been transmitted or routed to the destination without any concern or confusion by the network modules, hence improving network latency.

Furthermore, the motivation for using the content based memory unit described in claims 20-23, would have so that the overall processing satellite system efficiency and performance is improved by utilizing the search, retrieve and transmission latency.

Additional References

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Lin et al, U.S. Patent No. 6,791,952 B2.
- b. Puente et al, U.S. Patent No. 6,038,594


Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is N/A. The examiner can normally be reached on 8.30am-5.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Zarni can be reached on 703-308-6687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ZARNI MAUNG
PRIMARY EXAMINER